

Application No. 10/734,742
Response dated January 4, 2007
Reply to Office Action of October 4, 2006

Listing of Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.(currently amended) An orthodontic appliance for attachment to a tooth, the appliance comprising:

a bracket having a flexible base that includes an inner central portion and an outer peripheral portion contiguous with and in surrounding relation to the inner central portion; and

a bonding structure configured to provide bonding of the bracket with adhesive to a tooth and the bonding structure being compliantly attached to the bracket at a plurality of points around the perimeter of the outer peripheral portion of the base and substantially free from attachment to the bracket at the inner central portion of the base to provide compliant movement between the bracket and the bonding structure upon impact to the bracket, so as to resist transmission of impact from the bracket to the adhesive.

2.(original) The orthodontic appliance of claim 1 wherein the bonding structure includes a mesh.

Claims 3-6 (canceled)

7.(original) The orthodontic appliance of claim 4 wherein the outer peripheral portion comprises a metal sheet.

8.(currently amended) The orthodontic appliance of claim 7 wherein the metal sheet is a foil; the bonding structure being attached in at least one point to the foil.

Claims 9-11 (canceled)

12. (currently amended) The orthodontic appliance of ~~claim 10~~-claim 1 wherein the bracket is a metal bracket.

13. (currently amended) The orthodontic appliance of ~~claim 10~~-claim 12 wherein the bonding structure is a wire mesh.

Claim 14 (canceled)

15. (currently amended) The orthodontic appliance of ~~claim 1-claim 12~~ wherein the bracket comprises a material selected from the group consisting of a metal, a ceramic and a plastic.

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16. (currently amended) An orthodontic appliance for attachment to a tooth, the appliance comprising:

a bracket having a flexible base, the base having thereon an outer peripheral portion and an inner central portion; and
a mesh having an attachment to the outer peripheral portion around the perimeter thereof and encircling the inner central portion, and the mesh being substantially free from attachment to the inner central portion, the attachment providing compliant movement between the inner central portion and the mesh upon impact.

17.(original) The orthodontic appliance of claim **16** wherein the bracket is formed of a material selected from the group consisting of a metal, a ceramic and a plastic.

18.(original) The orthodontic appliance of claim **16** wherein the bracket and the mesh are each formed of metal and the attachment includes a weld joining the mesh to the base around the outer peripheral portion.

19.(original) The orthodontic appliance of claim **16** wherein the outer peripheral portion is contiguous with the inner central portion.

Claim **20** (canceled)

21.(original) The orthodontic appliance of claim **16** wherein the base includes a pad formed of a metal sheet having thereon the outer peripheral portion surrounding the inner central portion on one side of the sheet;
the bracket includes archwire support structure fixed to the pad on one side thereof opposite the inner central portion; and
the attachment including a weld of the mesh to the outer peripheral portion of the pad.

22.(original) The orthodontic appliance of claim **21** wherein the pad is a foil.

Claim **23** (canceled)

24.(currently amended) An orthodontic appliance for attachment to a tooth, the appliance comprising:

a bonding structure for bonding the appliance to a tooth with adhesive;
an external surface extending from the bonding structure and exposed to impact from an external object against the external surface; and
a resilient interface on the appliance between the bonding structure and the external surface to absorb impact between the tooth and the object.

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Claims 25-26 (canceled)

27.(currently amended) The orthodontic appliance of claim 24 wherein:
the external surface and the bonding structure are made of metal; and
~~the interface is between the bonding structure and the external surface.~~

Claims 28-33 (canceled)

34.(currently amended) The orthodontic appliance of claim 24 further comprising:
~~a second external surface protective barrier~~ extending from the bonding structure ~~on an occlusal edge thereof, the second external surface protective barrier~~ being tapered so as to deflect an impacting object.

35.(original) The orthodontic appliance of claim 24 further comprising:
adhesive between the bonding structure and the tooth, the adhesive having a low modulus of elasticity.

36.(currently amended) The orthodontic appliance of claim 24 further comprising:
adhesive between the bonding structure and the tooth, the adhesive having an elongation-to-failure of substantially ~~less more~~ than 9-1 percent.

Claims 37-56 (canceled)